ABSTRACT OF THE DISCLOSURE

A facility and method steps for air curing tobacco in an enclosure include hanging the tobacco in the enclosure having at least one vertically arranged air duct positioned in a central portion of the enclosure, at least one in-line fan positioned in a vertical portion of the at least one vertically arranged air duct, at least one ventilating fan located in an upper portion of the enclosure and at least one openable and closeable opening in at least one side wall of the enclosure. The humidity within the enclosure is lowered by opening the openable and closeable openings in at least one side wall of the enclosure and forcing warm air from the top of the enclosure down through the tobacco within the enclosure. Humidity is raised within the enclosure by closing the openable and closeable side openings and introducing water or other aqueous solutions into the vertical air ducts while operating the inline fans within the air ducts to diffuse the moisture and drive it upwards for warming and uniform distribution throughout the barn.